



Ecosystem Management Program BULLETIN



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THE NATURAL RESOURCE STAFF DID IT AGAIN! The Army's Natural Resource Program on O'ahu has been working managing rare and endangered species on Army Training lands for 10 years. Over this time the emphasis of the program has shifted from surveying for new populations of rare taxa to managing these populations to stabilize their numbers and the habitat that supports them. This being said, we are always on the look out for new rare species populations and have discovered a number of new populations in the last quarter. At Māku Military Reservation *Neraudia angulata* var. *dentata* was discovered in Punapōhaku gulch in the northern portion of the training area. *N. angulata* var. *dentata* had been found in neighboring Kaluakauila gulch in the 1985 but since those died; no plants of this variety were known from the training area. This is a significant discovery for the conservation of this taxon as the Punapōhaku population represents the

only Leeward Wai'anāe location for variety *dentata*. Natural Resource Staff (NRS) have collected cuttings to secure the stock from this site. In addition, NRS are considering constructing a small scale fence to protect the plant from pigs. Future plans are to reintroduce stock from this site into the Kaluakauila management unit.



Tetramolopium filiforme in Schofield West Range

At Schofield Barracks, West Range, NRS discovered a new population of *Tetramolopium filiforme*. Nine plants were found on a cliff in Mohiākea gulch near Puu Kalena. It is highly likely that more individual plants will be found upon further survey. NRS collected some fruit from the mature plants in the population and will continue to pursue full genetic



Neraudia angulata var. *dentata* in Punapōhaku

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storage collections. This population is the only windward Wai'anae site known of this taxon. NRS will look at updating management plans for these taxa in the coming year to incorporate these significant discoveries and will continue to document new discoveries.



PTA CAC members standing upon a modified causeway on a historic trail located on PTA's Westside

Pōhakuloa staff are conducting archival research in an effort to determine the possible use of this trail. Field visits such as this are a regular component of the CAC meetings, providing the group the opportunity to observe first hand the ongoing management efforts of the PTA Cultural Resources staff.



PTA CAC member inspects a healthy *Mrysiue lanaiensis*, kōlea, tree

PŌHAKULOA'S CULTURAL ADVISORY COMMITTEE. On Nov 28, 2005 Pōhakuloa Training Area Archaeologist, Bill Godby, led the PTA Cultural Advisory Committee (CAC) on a field trip to view a historic trail on Pōhakuloa's west side. The CAC meets monthly to advise the PTA Commander on Native Hawaiian matters and provide input from various Big Island communities. The group visited a paved curbstone trail extending at least 2.3 miles, that includes several stone land bridges/causeways, in addition to numerous ahu and rock platforms. Although the existence of this trail has been known for sometime, this is the first time the cultural resource program has been able to facilitate a site visit with the Native Hawaiian community. Due to its remote location, helicopter transport was utilized to ferry individuals in and out. The field visit was attended by Pōhakuloa Commander, Lieutenant Colonel, Kimberly Rapacz, three Pōhakuloa archaeologists, and seven members of the CAC. Response to the field visit was exceptional, with a great deal of discussion as to the possible date of the trail as well as its use. Some members believe that a pre-contact trail may have been modified in historic times to accommodate horses, donkeys or mules.

ARMY CONDUCTS RAT CONTROL TO HELP THE O'AHU ELEPAIO. The O'ahu Elepaio, Hawaiian flycatcher, was listed as an endangered species in 2000 by the U.S. Fish and Wildlife Service. The third largest population of this forest bird exists above the Schofield Barracks West Range impact area. In 2003, the U.S. Fish and Wildlife Service issued a Biological Opinion (BO) that outlined measures designed to offset potential impacts from military training to 23 endangered plants and the O'ahu Elepaio. The BO requires the Army to manage 75 Elepaio pairs through the control of alien rats during the breeding season. These pairs may be managed exclusively at Schofield Barracks Military Reservation or a combination of on site and at other locations on O'ahu. A subcommittee of agencies involved in Elepaio management met in August 2004 to select the best sites for predator control. These sites were selected based on the geographic spread of populations (attempting to capture the current extant range of the taxon), population size, and cooperative landowners. The group recommended that the Army Natural Resource Staff (NRS) pursue predator control at Moanalua Valley in the Central Ko'olau Mountains, at Mākaha Valley since this population is

the northernmost robust population in the Wai'anae Mountains, Honouliuli Forest Reserve ('Ēkahanui gulch) in the south central Wai'anaes because of the large population at this location, and finally at the only robust windward O'ahu population between Waikāne and Kahana Valleys. A portion of the large population of Elepaio in the Southern Ko'olau Mountains is already being managed by the State of Hawai'i, Division of Forestry and Wildlife and a private entity. Managing these populations would best capture the current extent of the Elepaio on O'ahu and have significant conservation benefit.

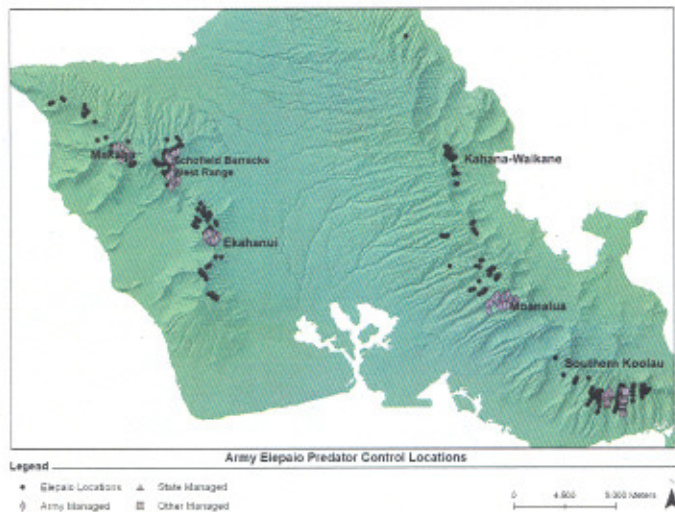
In 2005, the Army conducted predator control during the breeding season for 44 pairs at four locations (SBMR, Honouliuli Forest Reserve, 'Ēkahanui gulch, and Mākaha Valley). This represented an increase of managed pairs from 15 managed in the previous year. Twenty-two pairs (50%) successfully fledged young for a total of 25 fledglings (1.1 fledglings per successful pair). Currently, in the 2006 breeding season, the Army is conducting predator control at all of the proposed sites with the exception of the Waikāne-Kahana site because a right of entry agreement is still being negotiated. We are hopeful that in the 2007 breeding season predator control will begin here. As for the other four sites, we are conducting predator control for 15 pairs of birds at SBMR, for 24 pairs at Moanalua, for 13 at Mākaha,

management. We are fortunate to have very experienced and devoted ornithologists on our staff who have been invaluable in getting us to our goal of 75 pairs in a relatively short time period. In the next year, NRS will work with Waikāne-Kahana landowners to obtain formal access for conducting predator control during the next nesting season. This may result in reducing the number of pairs being managed at one or more of the other sites. These efforts are very exciting for the conservation of O'ahu Elepaio!



O'ahu Elepaio

INVASIVE SLUGS AND SNAILS to be the discussion topic of a forum at this year's Hawai'i Conservation Conference. It is well known that cannibal snails are a threat to Hawai'i's native kākahi tree snails. What some people may not know is that these same snails are responsible for the extinction of Tahiti's endemic *Partula* on the island of Moorea and 24 of the 106 endemic snails in Mauritius. The good news is that Marty Meyer, a University of Hawai'i research student, is working on feeding trial experiments using invasive species as prey for *Euglandina* to look at patterns in predation. So far, it looks like there is a lot of prey preference regarding size and type of prey. In addition, Stephanie Joe, Army Natural Resource Technician, documented that the seedling survival rate of some endangered native plant species doubles when slugs are excluded from their habitat. She is beginning work on collecting baseline data on slug densities, which will help determine the effectiveness of different types of slug control. She will be working this next year towards getting some type of slug control method approved for use in a forest setting.



Overview of Elepaio occurrences and current management efforts

and for 23 pairs at 'Ēkahanui. This brings the total territories being managed this year to 75. Intensive surveys, monitoring, banding and re-sighting are required to guide effective predator control



Euglandina devouring another snail

Until recently, this basic information about these threats to Hawai'i's native species was unknown. The forum is being organized to provide a platform for those groups interested in this problem to come together and brainstorm where we go from here. It is very important that these threats be brought to the forefront so that progress can be made towards establishing a control method. This will require the cooperation of many different groups. The forum will be held during the afternoon session of the Hawai'i Conservation Conference, 1 pm until 5 pm on Thursday, July 27. If you are interested in speaking please contact the Army Natural Resource Manager, Michelle Mansker, 656-2878 ext. 1029. The deadline for submission of the forum abstracts to the HCC folks is April 24, 2006 and therefore must be received by the Army no later than April 14, 2006.

INTRODUCING NEW MEMBERS OF THE O'AHU AND PTA STAFF:

Lucas began work as a Natural Resource Management Technician with the Army's O'ahu Program in January 2006. Lucas received a B.S. in Natural Resource Management from Cornell University in May 2004. Lucas was raised in Hawai'i and has worked in the field of conservation in Hawai'i since high school. Lucas was a member of the Youth Conservation Corps, he interned with the State of Hawai'i, Natural Area Reserves O'ahu Program and he interned with our program in the summer of 2003. Most recently, Lucas traveled to Papua New Guinea with Dr. Thane Pratt to assist with the field studies in preparation of a bird guide for

Papua New Guinea. He is back to work in Hawai'i for now but may attend graduate school in a few years. Lucas has a very broad base of experience in conservation, having conducted weed control, tree snail work, rare plant work, and avian conservation work. We are happy that Lucas can "hit the ground-running" on many of our projects as he is already familiar with O'ahu's Natural areas and our projects. Lucas's commitment to conservation and great sense of humor make him a pleasure to work with. Welcome aboard Lucas!

George began work with the O'ahu program as a Natural Resource Management Technician in January 2006. He received his B.S. in Biology from the University of the Redlands in May 2005. George was born and raised on Hawai'i Island in the Ka'u Area. George got his first introduction to the field of conservation in Hawai'i through the U.H. Hawaiian Intern Program (UH-HIP) run out of U.H. Hilo. For his UH-HIP project he worked with the talented staff of Hawai'i Volcanoes National Park (HAVO) in forest bird conservation. Since he graduated from college, he interned with the U.S. Geological Survey, Biological Resources Division at HAVO in botanical conservation. We are excited to have George's experience, knowledge and love for conservation on our team. Welcome aboard George!

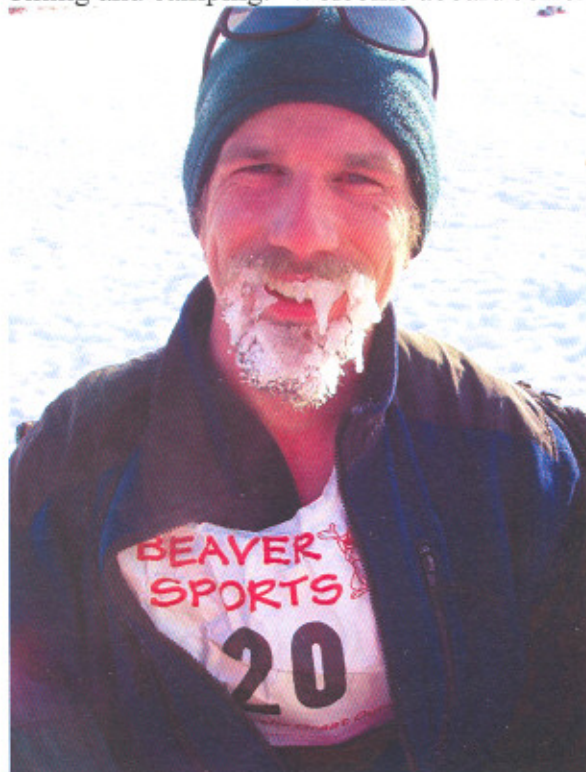


Lucas Morgan and George Akau

Mike Bresell is a new member of the PTA biologist team. He has been working at PTA as a member of the weed crew. Currently he is acting weed crew leader and is keeping the crew running smoothly. He

earned is undergraduate degree at the University of Hawai'i in Hilo. Welcome Mike!

Jefferson Jacobs joins the PTA biologist team from a year-long sojourn through Argentina. He and his wife, Carla, spent the year traveling through her native country. Prior to their trek, Jefferson earned his Master's degree studying peregrine falcons at the University of Alaska and worked for the National Park Service. Jefferson was born and raised in Maine and earned his undergraduate degree at the University of Maine. He enjoys outdoor activities like hiking, biking and camping. Welcome aboard Jefferson!



Jefferson Jacobs in fine form!

Mark Montgomery is a new addition to the PTA weed crew. Prior to joining the PTA staff he worked for his parent's hiking tour company, Hawaiian Walkways in Honoka'a. Mark was born and raised on the Big Island and resides in Waimea with his wife Cindy. He is an avid hiker and outdoors person who enjoys working with native plants. Welcome to the team Mark!

Ken Spencer will be the Fence Coordinator for Pōakuloa Training Area. Ken has primarily worked as a DOD and DOE contractor for the past 17 years. Ken received his BA in Zoology from California State University, Fresno in 1989. Ken ran his own

fencing and biological consulting business before returning to government work. Ken and his wife, Maria, have three children, Jacob, Lauren and Jenna, ranging in age from 5-12 years old. Welcome aboard Ken!



Mark Montgomery

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